

REMARKS

Applicant respectfully traverses the rejections of claims 1-3, 6-9, and 25-35 under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 6,923,837 to Longhi, Jr. et al. ("Longhi et al.") in view of U.S. Patent No. 5,501,916 to Teramoto et al. ("Teramoto et al.") and U.S. Patent No. 6,312,848 to Kilb et al. ("Kilb et al."). No claims have been amended.

The Examiner has failed to establish a *prima facie* case of obviousness for at least two reasons. First, the Examiner failed to identify a reference teaching or suggesting "first and second cells aligned axially," as recited in claim 1, and none of the cited references, alone or in combination, suggest or disclose this feature. Second, Longhi et al. teaches away from "a first edge extending from an end of said first cell . . . a second edge extending from an adjoining edge of the second cell . . . said first and second edges overlapping," as recited in claim 1.

In relying on Longhi et al., the Examiner fails to account for Longhi et al.'s lack of a disclosure or suggestion of the claim feature "first and second cells aligned axially," as recited in claim 1. Longhi et al. discloses a consecutively wound battery in which cylindrical shaped battery cells are aligned concentrically, not axially. Fig. 1 depicts the structure of Longhi et al. with an innermost cell 10, a middle cell 12, and an outermost cell 14 arranged so that each cell is stacked concentrically within the other. In other words, the battery cells of Longhi et al. extend radially outward from the hollow core of the innermost cell 10. The battery cells of Longhi et al. do not extend axially, or side-by-side. Thus, Longhi et al. does not disclose or suggest "first and second cells aligned axially," as recited in claim 1.

Neither Teramoto et al. nor Kilb et al. cure this deficiency because neither discloses or suggests “first and second cells aligned axially,” as recited in claim 1. Teramoto et al. discloses a single battery cell with a through-hole, and provides no basis for aligning multiple battery cells axially. Teramoto et al., Figs. 3, 4; col. 4, lines 33-36. Kilb et al. discloses a battery in the form of a flat, button cell that could not be aligned axially along an integral hollow shaft, as recited in claim 1. Kilb et al., Figs. 1-4; col. 2, lines 38-42.

Because Longhi et al., Teramoto et al., and Kilb et al. fail to teach or suggest “first and second cells aligned axially,” as recited in claim 1, no combination of the cited references teaches or suggests all the features of the claims. The Examiner, therefore, has failed to establish a *prima facie* case of obviousness. M.P.E.P. § 2143.

Moreover, Longhi et al. teaches away from “a first edge extending from an end of said first cell . . . a second edge extending from an adjoining edge of the second cell . . . said first and second edges overlapping,” as recited in claim 1. This construction of the secondary battery, disclosed at paragraph [0032] of the present application, “obviates the need for a collector,” reducing the internal resistance from connecting the cells. Accordingly, the overall output of the secondary battery improves with a reduced number of parts. In contrast, as discussed below, the structure of Longhi et al. expressly requires, for example, a separate connector 28 or 68 to connect its concentrically adjoining cells, teaching away from “first and second edges overlapping” to eliminate a collector, or connector, between cells.

Each battery cell of Longhi et al. comprises at least one anode layer 18, at least one electrolyte layer 20, and at least one cathode layer 22. Longhi et al., col. 5, lines

41-44. An insulating layer 64 separates the battery cells and does not thus correspond to the separator of claim 1, which separates electrodes of a single battery cell. The insulating layer 64 extends beyond the anode layer 18 and the cathode layer 22, thus preventing the anode layer 18 of one cell from overlapping the cathode layer 22 of another cell. Longhi et al., col. 7, lines 47-51. The concentric arrangement of the cells, separated by insulating layer 64, further requires, for example, a jumper 28 or shoooping material 68 to electrically connect the anode layers 18 and the cathode layers 22 between two cells. See Longhi et al., Figs. 4B, 7B; col. 6, lines 23-25; col. 8, lines 9-13. Because Longhi et al. requires a separate connector between the battery cells, it teaches away from the secondary battery of the present application, disclosed at paragraph [0032], which "obviates the need for a [separate] collector" to connect the electrodes between battery cells. Thus, Longhi et al., by interposing an insulating layer between concentrically adjoining battery cells, teaches away from "a first edge extending from an end of said first cell . . . a second edge extending from an adjoining edge of the second cell . . . said first and second edges overlapping," as recited in claim 1. A reference that teaches away from the claimed combination rebuts a *prima facie* case of obviousness. M.P.E.P. § 2145. Thus, even if the Examiner had established a *prima facie* case of obviousness, Longhi et al. teaches away from the claims by requiring a separate connector between the battery cells, rebutting the Examiner's position.

In view of the foregoing remarks, Applicant respectfully requests reconsideration and allowance of claims 1-3, 6-9, and 25-35.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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